

Application No. 10/088,854
Amendment Dated February 15, 2006
Reply to Office Action of 11/02/2005

Remarks/Arguments:

Claims 11, 12 and 15-21 were pending in the application. Claims 11, 12 and 15-21 have been rejected.

In response to the office action:

- Claims 11, 15, 16 and 21 have been amended.
- Claim 20 has been cancelled.

Claim Rejections – 35 USC §112, Second Paragraph

Claims 11, 12, 15, 16 and 21 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that although the limitation of "ester, amide" has been deleted from claim 11, the limitation of "prodrug" still has indefinite metes and bounds because it is not clear what moiety would constitute a "prodrug", and where the location of said moiety would be, especially when R¹, R⁴, and R⁷-R⁹ represent substituents that cannot be esterified or amidated.

The Examiner further states that Claim 21 recited the definition of "prodrug" that includes "alkyl, aryl or aralkyl derivative thereof" which has indefinite metes and bounds because the structure of said derivative is vague and indeterminate.

Applicants believe that the specific rejection of Claim 21, was actually directed at Claim 20 which recited the objected to subject matter.

Whilst Applicants do not agree with the Examiners rejections, in order to expedite prosecution the word "prodrug" has been deleted from Claims 11, 15, 16 and 21 and Claim 20 has been cancelled.

Claim Rejections – 35 USC §112, First Paragraph

Claims 11, 12, and 15-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The Examiner states that the claim(s) contain subject matter which is not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 11 had been amended to define R¹⁴ which included R^{3b} but the Examiner believes the definition of R^{3b} includes substituents that had no support in the specification such as: "nitro, .., oxo, cyanoC₁₋₄alkyl, cyclopropyl, C₁₋₄alkylsulphonylC₁₋₄alkyl,

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C_{1-4} alkoxycarbonyl, $di(C_{1-4}alkyl)amino$, $C_{1-4}alkylaminoC_{1-4}alkyl$, ..., $-C(O)NR^{39}R^{40}$, $-NR^{41}C(O)R^{42}$, ...".

Claims 12,15-21 were rejected as being dependent on claim 11 and carrying over the new matter presented.

Applicants believe that the subject matter relating to R^{14} and R^{38} introduced into claim 11 by amendment was in fact disclosed in the application as filed and apologize to the Examiner for not more clearly demonstrating this in our previously filed amendment. This subject matter introduced into Claim 11 can be derived as follows (where page references refer to the published PCT application):

page 31 line 8 – page 32 line 2:

In connection with formula (IIB), R^{68} is defined as:

"halo, cyano, nitro, trifluoromethyl, $C_{1-3}alkyl$, $-NR^{12}R^{13}$ (wherein R^{12} and R^{13} , which may be the same or different, each represents hydrogen or $C_{1-3}alkyl$), or a group $-X^1R^{14}$ where X^1 and R^{14} are as defined in relation to formula (I) and R^{14} is particularly a group of sub group (1) or (10),"

page 9:

group (1) is defined as:

"hydrogen or $C_{1-5}alkyl$ which may be unsubstituted or which may be substituted with one or more groups selected from hydroxy, oxiranyl, fluoro, chloro, bromo and amino (including $C_{1-3}alkyl$ and trifluoromethyl);"

page 11:

group (10) is defined as:

" $-R^9R^{38}$ (wherein R^{38} is as defined hereinbefore);"

and R^{38} is defined in group (9) as:

" R^{38} (wherein R^{38} represents a pyridone group, a phenyl group or a 5-6-membered aromatic heterocyclic group (linked via carbon or nitrogen) with 1-3 heteroatoms selected from O, N and S, which pyridone, phenyl or aromatic heterocyclic group may carry up to 5 substituents selected from hydroxy, nitro, halogeno, amino, $C_{1-4}alkyl$, $C_{1-4}alkoxy$, $C_{1-4}hydroxyalkyl$, $C_{1-4}aminoalkyl$, $C_{1-4}alkylamino$, $C_{1-4}hydroxyalkoxy$, oxo, cyano $C_{1-4}alkyl$, cyclopropyl, $C_{1-4}alkylsulphonylC_{1-4}alkyl$, $C_{1-4}alkoxycarbonyl$, $di(C_{1-4}alkyl)amino$, $C_{1-4}alkylaminoC_{1-4}alkyl$, $C_{1-4}alkanoyl$, $di(C_{1-4}alkyl)aminoC_{1-4}alkyl$,

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C₁₋₄alkylaminoC₁₋₄alkoxy, di(C₁₋₄alkyl)aminoC₁₋₄alkoxy, carboxy, carboxamido, trifluoromethyl, cyano, -C(O)NR³⁹R⁴⁰, -NR⁴¹C(O)R⁴² (wherein R³⁹, R⁴⁰, R⁴¹ and R⁴², which may be the same or different, each represents hydrogen, C₁₋₄alkyl, hydroxyC₁₋₄alkyl or C₁₋₃alkoxyC₂₋₃alkyl) and a group -(O)-(C₁₋₄alkyl)_gringD (wherein f is 0 or 1, g is 0 or 1 and ring D is a cyclic group selected from C₃₋₆cycloalkyl, aryl or 5-6-membered saturated or unsaturated heterocyclic group with 1-2 heteroatoms, selected independently from O, S and N, which cyclic group may bear one or more substituents selected from halo and C₁₋₄alkyl);"

Applicants believe that the above explanation should be sufficient for the Examiner to see that this subject matter was indeed described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants politely request that the Examiner acknowledges this.

Claim Rejections – 35 USC §103

Claims 11 and 15-19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et. al. (US'225). The rejection remains as stated in the previous action.

In our previous response, Applicants argued there was no motivation in the reference for one skilled in the art to move the -OH group from the 5th position (meta-) to the 4th (para-) position on the aniline ring to obtain the claimed compounds.

The Examiner was not persuaded of this and states that while the preferred embodiment has the hydroxy group at the meta position, it does not teach away from the generic disclosure, nor does it negate the motivation found in the generic disclosure. The Examiner further states that it is within the level of the skilled chemist to make compounds wherein a substituent can be anywhere on the phenyl ring and that the motivation for modifying the compound in Example 17 of US'225 comes from the equivalent teaching for substituent R³ at all positions on the phenyl ring. Finally the Examiner states that since R³ only represents a handful of moieties this, does not pose a problem for the skilled chemist to select a -OH group in the para position thus, at the time that the invention was made, it would have been obvious to make and use compounds as claimed herein in view of Thomas et. al.

Whilst Applicants do not agree with the Examiners position here, in order to expedite prosecution we have amended the claims to remove the possibility of the -Z-(CH₂)_n-R⁸ group

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reducing down to hydroxy. We have moved the definition of n towards the start of claim 11 and incorporated it as part of the definition of R^9 . As previously written,

n was 0, or an integer of from 1 to 6; and

R^9 was hydrogen, ethenyl, optionally substituted phenyl, optionally substituted pyridyl or optionally substituted furanyl where optional substituents for R^9 groups are C_{1-3} alkoxy, C_{1-3} alkyl, halo or nitro.

Applicants have amended these groups to read:

n is an integer of from 1 to 6 and R^9 is hydrogen, or

n is 0 or an integer of from 1 to 6 and R^9 is ethenyl, optionally substituted phenyl, optionally substituted pyridyl or optionally substituted furanyl where optional substituents for R^9 groups are C_{1-3} alkoxy, C_{1-3} alkyl, halo or nitro.

This amendment removes the possibility of n being 0 when R^9 is hydrogen and thus the possibility of $-Z-(CH_2)_n-R^9$ group reducing down to hydroxy.

The remaining groups defined by $-Z-(CH_2)_n-R^9$ are structurally distinct from those groups exemplified in Thomas *et al* thus Applicants believe that this amendment should be enough to overcome the Examiners obviousness rejection. Applicants believe the claims as now presented are not obvious in view of Thomas *et al*.

The above amendments have been made without prejudice to Applicants right to prosecute any cancelled subject matter in a timely filed continuation application.

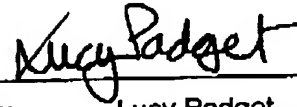
Applicants believe the application is in condition for allowance, which action is respectfully requested.

A petition for a 1 month extension of time is being filed herewith, the Commissioner is hereby authorized to charge any deficiency in the fees or credit any overpayment to deposit account No. 50-3231, referencing Attorney Cocket No. Z70601-1P US.

Although Applicants believe no excess claim fees are due, the Commissioner is hereby authorized to charge any deficiency in the fees or credit any overpayment to deposit account No. 50-3231, referencing Attorney Cocket No. Z70601-1P US.

Respectfully submitted,

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Enclosures: Transmittal Form
Fee Transmittal Form
Petition for a 1 month extension of time